What Factors are Associated with Antisocial Behavior in Marine Combat Veterans?

NAVY AND MARINE CORPS COMBAT & OPERATIONAL STRESS CONFERENCE 2010:
"TAKING ACTION, MEASURING RESULTS"

NAVAL CENTER
COSC
COMBAT & OPERATIONAL STRESS CONTROL

What Factors are Associated with Antisocial Behavior in Marine Combat Veterans?

Stephanie Booth Kewley
Robyn Highfill-McRoy
Gerald E. Larson
Cedric F. Garland
Thomas A. Gaskin

Background

- When military personnel engage in misconduct, the results can be detrimental to unit morale and readiness.
- It is estimated that over 50% of enlisted attrition is due to misconduct and antisocial behavior (including drug use, alcohol misuse, patterns of misconduct and serious offenses).
- Military misconduct is damaging to the security and reputation of the armed forces.

Misconduct and the Media

The New York Times

© 2008 The New York Times

SUNDAY, JANUARY 13, 2008

CREDITS ON PAGE 16

POSTSCRIPTS TO COMBAT

At least 121 veterans of Iraq and Afghanistan committed a killing in this country, or were charged with one, after returning home from war. In many cases, combat trauma and the stress of deployment appeared to play a role.

Across America, Deadly Echoes of Foreign Battles

By DEBORAH SONTAG and LIZETTE ALVAREZ

Late one night in the summer of 2005, Matthew Sepi, a 20-year-old Iraq combat veteran, headed out to a 7-Eleven in the seedy Las Vegas neighborhood where he had settled after leaving the Army.

This particular 7-Eleven sits in the shadow of the Stratosphere casino-hotel in a section of town called the Naked City. By day, the area, littered with malt liquor cans, looks depressed but not menacing. By night, it becomes, in the words of a local homicide detective, "like Fallujia."

Mr. Sepi did not like to venture outside too late. But, plagued by nightmares about an Iraqi civilian killed by his unit, he often needed alcohol to fall asleep. And so it was that night, when, seized by a gut feeling of lurking danger, he slid a trench coat over his slight frame — and tucked an assault rifle inside it.

"Matthew knew he shouldn't be taking his AK-47 to the 7-Eleven," Detective Laura Andersen said, "but he was scared to death in that neighborhood, he was military trained and, in his mind, he needed the weapon to protect himself."

Head bowed, Mr. Sepi scurried down an alley, ignoring shouts about trespassing on gang turf. A battle-weary grenadier who was still legally under-age, he paid a stranger to buy him two tall cans of beer, his self-prescribed treatment for post-traumatic stress disorder.

WAR TORN
Casualties on the Home Front

As Mr. Sepi started home, two gang members, both large and both armed, stepped out of the darkness. Mr. Sepi said in an interview that he spied the butt of a gun, heard a boom, saw a flash and "just snapped."

In the end, one gang member lay dead, bleeding onto the pavement. The other was wounded. And Mr. Sepi fled, "breaking contact" with the enemy, as he later described it. With his rifle raised, he crept home, loaded 180 rounds of ammunition into his car and drove until police lights flashed behind him.

"Who did I take fire from?" he asked urgently. Wearing his Army camouflage pants, the diminutive young man said he had been ambushed and then instinctively "engaged the targets." He shook. He also cried.

"I felt very bad for him," Detective Andersen said.

Nonetheless, Mr. Sepi was booked, and a local newspaper soon reported: "Iraq veteran arrested in killing."

Town by town across the country, headlines have been telling similar stories. Lakewood, Wash.: "Family Blames Iraq After Son Kills Wife." Pierre, S.D.: "Soldier Charged With Murder Testifies About Postwar Stress." Colorado Springs: "Iraq War Vets Suspected in Two Slayings, Crime Ring."

Individually, these are stories of local crimes, gut-wrenching postscripts to the war for the military men, their victims and their communities. Taken together, they paint the patchwork picture of a quiet phenomenon, tracing a cross-country trail of death and heartbreak.

The New York Times found 121 cases in which veterans of Iraq and Afghanistan committed a killing in this country, or were charged with one, after their return from war. In many of those cases, combat trauma and the stress of deployment — along with alcohol abuse, family discord and other attendant problems — appear to have set the stage for a tragedy that

Continued on Page 14

Misconduct in combat veterans is an area of current concern.

Background

- Research suggests that exposure to combat may be a substantial risk factor for antisocial behavior.
- Studies from Vietnam found that combat veterans were at heightened risk for antisocial behavior.
- The association between combat exposure and antisocial behavior has rarely been studied among contemporary warfighters (e.g., OIF/OEF).

Posttraumatic Stress Disorder (PTSD)

Past research suggests that the association between combat exposure & misconduct may be primarily due to PTSD.

- **Diagnosis of PTSD**
  - **Requires a traumatic event and three types of symptoms:**
    - **Reexperiencing**
    - **Avoidance or numbing**
    - **Hyperarousal… (Anger)**

Objective/Hypotheses

- The objective of this study was to identify demographic and psychosocial factors associated with antisocial behavior in Marines who had deployed to

Method

- The *Warfighter Status Survey* was administered to a large sample (N = 1576) of enlisted and officer, active duty and reservist Marines who had deployed to a combat zone at least once. No particular subgroups of Marines were targeted for the survey.
- Survey sites were Marine bases in California and Okinawa.

Measures Used in the Survey

- **Antisocial behavior was measured using a scale that was adapted from the DoD Survey of Health Related Behaviors. Respondents were asked how many times in the past 12 months these things had happened. . .**

Sample items:

- ✓ **I had a disciplinary action taken against me**
- ✓ **I had a physical confrontation during an argument**
- ✓ **I had trouble with police**

Measures Used in the Survey

- PTSD was measured using the PTSD Checklist (PCL; Weathers et al., 1993).
- Mild traumatic brain injury (TBI) symptoms were measured using the same scale and the same scoring algorithm used by the Army (Hoge et al., 2008, NEJM).

Measures Used in the Survey

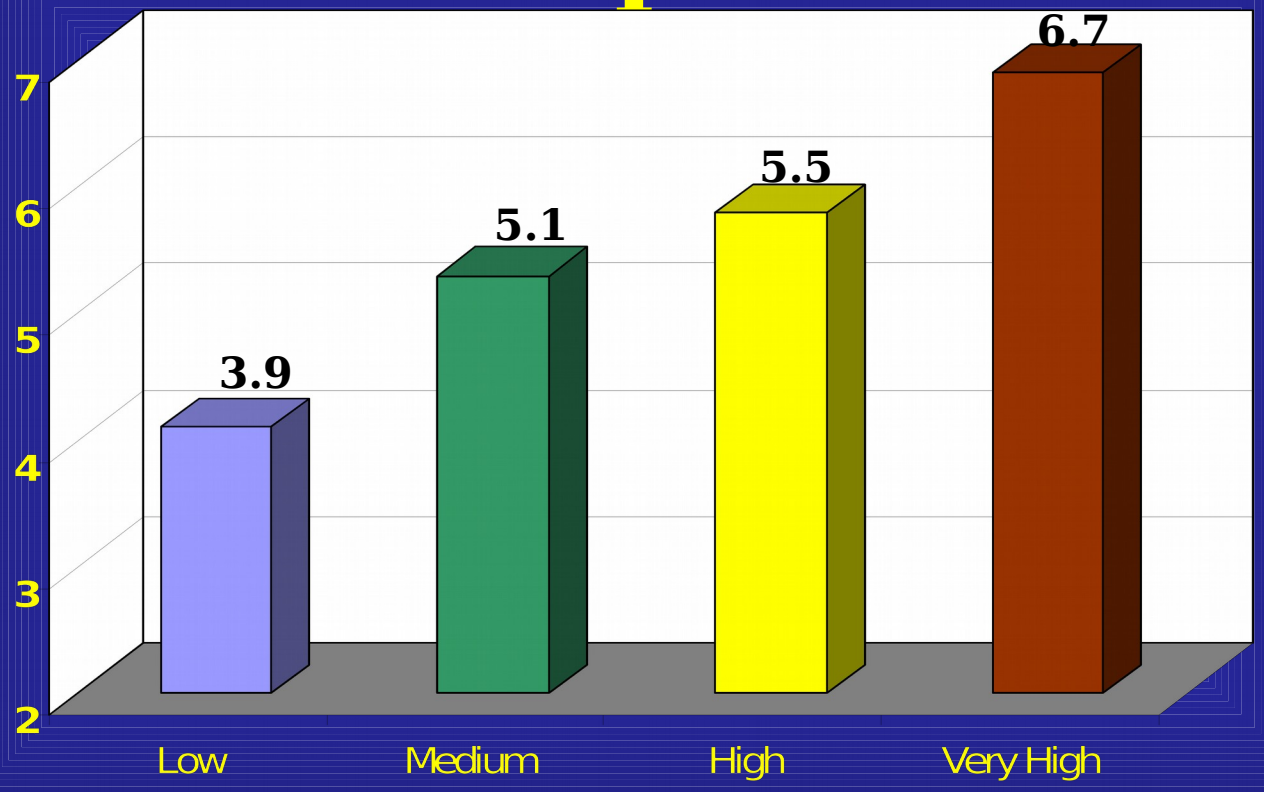
- Combat exposures were measured using a 16-item scale adapted from existing scales.
- Deployment-related stressors were measured using an 11-item scale. Sample items:
  - -Difficulty in communication with home
  - -Lack of time off
  - -Feeling homesick
  - -Problems with supervisor(s)/chain of command

Demographics

N = 1576 Marines

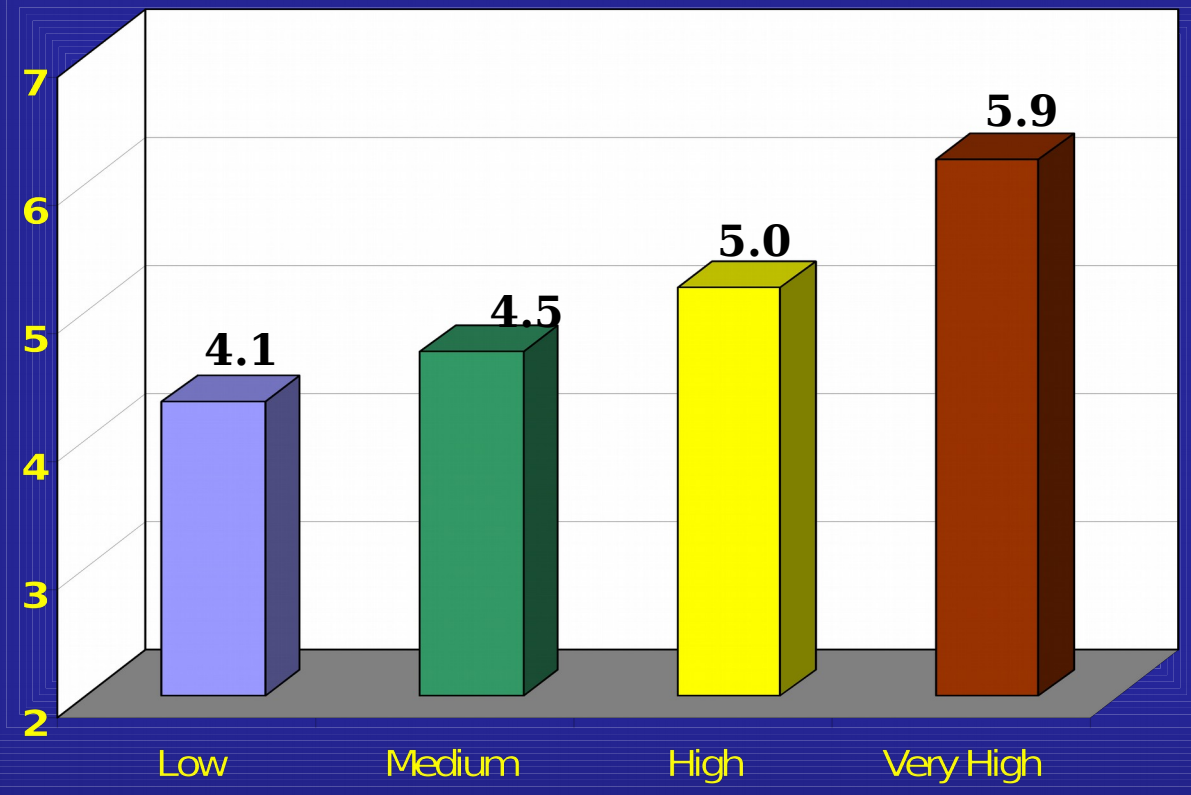
% Male	94.9%
% Active Duty	83.7%
% IAs	15.7%
Multiple Deployments	46.0%
Average Tenure	6.7 years
Average Age	26.2

Antisocial behavior as a function of combat exposure



Marines with higher combat exposure had higher rates of antisocial behavior.

Antisocial behavior as a function of deployment-related stressors



Marines with higher level of deployment-related stressors had higher rates of antisocial behavior.

Most Common Deployment Stressors

	Endorsement
• Boredom or monotony	32.7%
• Heat and/or cold	32.2%
• Lack of time off	25.8%
• Lack of privacy	25.3%
• Concerns/problems back home	24.0%
• Feeling homesick	23.2%
• Long deployment length	19.0%
•	

Logistic Regression Analyses

- Objective was to identify factors associated with antisocial behavior among Marines
- Using logistic regression, we developed 2 models—one in which PTSD was included as a predictor of antisocial behavior and one which PTSD was NOT included as a predictor

Logistic Regression Analyses

- Logistic regression gives us Odds Ratios.

  Here is how to interpret an odds ratio:

- If we had an Odds Ratio of 2.0 between smoking and heart disease, that means that smokers are 2 times as likely to get heart disease as nonsmokers.

Significant Risk Factors for Antisocial Behavior – Model 1 (without PTSD)

Significant predictors of Antisocial Behavior (in order of magnitude):

- **Deployment-related stressors (OR = 3.0 for high vs. low)**
- **Marital status (OR = 2.4 for divorced vs. married)**
- **Age (OR = 2.3 for 18-22 yrs vs. ≥ 27 yrs)**
- **Combat exposure (OR = 1.8 for high vs. low)**
- **Mild traumatic brain injury symptoms (OR = 1.5 for present vs. absent)**

Significant Risk Factors for Antisocial Behavior – Model 2 (with PTSD)

Significant predictors of Antisocial Behavior (in order of magnitude):

- **PTSD (OR = 6.3 for present vs. absent)**
- **Deployment-related stressors (OR = 2.3 for high vs. low)**
- **Age (OR = 2.3 for 18-22 yrs vs. ≥ 27 yrs)**
- **Marital status (OR = 2.0 for divorced vs. married)**
- **Combat exposure (OR = 1.6 for high vs. low)**

Discussion

- Of 11 demographic and psychosocial factors examined in relation to antisocial behavior, 5 factors were strongly associated with antisocial behavior: PTSD symptoms, deployment-related stressors, combat exposure, younger age, and being divorced.
- The link between PTSD and antisocial behavior is consistent with previous research.

Discussion

Concept of "externalizing" form of PTSD is relevant to understanding misconduct in combat veterans.

Some military personnel may respond to combat trauma by becoming depressed and withdrawn; others respond with antisocial behavior.

Discussion

Another key finding: deployment-related stressors were an important predictor of antisocial behavior, even more important than combat exposure.

This is significant because deployment-[illegible]stressors are potentially [illegible]ble by the military.

Implications

- **Military members who engage in a pattern of misconduct should be screened for psychiatric disorders.**
- **Mental health providers should be aware of the effect of PTSD and combat exposure on behavioral problems among combat deployed military personnel.**

Questions?

Contact Information

- **Stephanie Booth Kewley, Naval Health Research Center, 619-553-8465, Stephanie.Kewley@med.navy.mil**
- **Robyn Highfill McRoy, Naval Health Research Center, 619-553-3535, Robyn.McRoy@med.navy.mil**

Back-up Slides

Assessment of Antisocial Behavior

- **23.9% of the sample scored high (>8) on the antisocial behavior scale.**

Here are the 9 items that made up the antisocial behavior scale:

- ✓**I had heated arguments with family or friends.**
- ✓**I got into a loud argument in public.**
- ✓**I had trouble on the job.**
- ✓**I drove unsafely.**

Assessment of Antisocial Behavior

Items that made up the antisocial behavior scale (cont.):

- ✓ **I had a physical confrontation during an argument.**
- ✓ **I disobeyed orders from my supervisor or chain of command.**
- ✓ **I neglected my family responsibilities.**
- ✓ **I had trouble with police (civilian or military).**
- ✓ **I had a disciplinary action taken against me.**

Items were answered on a scale ranging from "zero times" to "3 or more times" in the past year (indicating how many times it happened).

Limitations

- Study was cross-sectional.
- All variables were assessed using self-report.
- The surveys from which the data were drawn asked for identifying information, which may have led to underreporting of negative behaviors.